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6 UNITED STATES DISTRICT COURT
7 WESTERN DISTRICT OF WASHINGTON
8 AT SEATTLE

9 PACE INTERNATIONAL, LLC, *et al.*,

10 Plaintiffs,

11 v.

12 INDUSTRIAL VENTILATION, INC., *et al.*,

13 Defendants.

Case No. C08-1822RSL

ORDER CONSTRUING CLAIMS OF
THE '364 PATENT

14 Plaintiff Xeda International, S.A., is the owner of United States Patent No.
15 6,723,364 (“the patent” or “the ‘364 patent”), which relates to a fog treatment method for fruit
16 and vegetables involving the production of a fogging mist “composed of droplets exhibiting a
17 temperature of 200 to 280° C. which are driven with a linear velocity of between 110 and 140
18 m/s.” Col. 1, ll. 59-61. The process developed by Xeda International (which relies on higher
19 temperatures and greater velocities than the prior art) results in small, stable droplets that
20 produce a thin and homogenous coating of the fruit and vegetables. Plaintiffs allege that
21 defendants have directly and/or indirectly infringed independent claim 1 and dependent claims
22 2-4 and 22-24 of the ‘364 patent.

23 Determining whether a particular product or method infringes an existing patent
24 involves a two-step analysis. The Court must first identify the proper construction of the
25 asserted patent claim, an exercise which the Supreme Court has determined is a matter of law.
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ORDER CONSTRUING CLAIMS OF
THE '364 PATENT

1 Markman v. Westview Instruments, Inc., 517 U.S. 370, 384-91 (1996). After the claim has been
2 properly construed, the fact finder determines whether the accused device infringes the claim.
3 The Federal Circuit recently reiterated that, although the claims of the patent define the
4 invention to which the patentee is entitled the right to exclude, the claim construction analysis
5 must focus on how a person of ordinary skill in the art would understand the claim terms after
6 reading the entire patent. Phillips v. AWH Corp., 415 F.3d 1303, 1321, 1323 (Fed. Cir. 2005).

7 It is the person of ordinary skill in the field of the invention through whose eyes
8 the claims are construed. Such person is deemed to read the words used in the
9 patent documents with an understanding of their meaning in the field, and to have
10 knowledge of any special meaning and usage in the field. The inventor's words
11 that are used to describe the invention -- the inventor's lexicography -- must be
12 understood and interpreted by the court as they would be understood and
13 interpreted by a person in that field of technology. Thus the court starts the
14 decisionmaking process by reviewing the same resources as would that person,
15 viz., the patent specification and the prosecution history.

16 Phillips, 415 F.3d at 1313 (quoting Multiform Desiccants, Inc. v. Medzam, Ltd., 133 F.3d 1473,
17 1477 (Fed. Cir. 1998)).

18 The Phillips decision sets out a framework for claim construction that synthesizes
19 prior law while rejecting the Texas Digital Sys., Inc. v. Telegenix, Inc., 308 F.3d 1193 (Fed. Cir.
20 2002), line of cases because they put too much emphasis on extrinsic evidence. The Federal
21 Circuit highlighted the primacy of intrinsic evidence, rather than dictionaries, encyclopedias, and
22 treatises, in the claim construction analysis. The claims themselves provide "substantial
23 guidance" regarding the meaning of particular terms by providing a context for the contested
24 terms and comparisons against which to measure the scope of the various claims. Phillips, 415
25 F.3d at 1314-15. Unless the meaning of the claim language is "readily apparent even to lay
26 judges" (Phillips, 415 F.3d at 1314), the court should "rely heavily" on the patentee's written
description of the invention (Phillips, 415 F.3d at 1317), giving the claims "their broadest
reasonable construction 'in light of the specification as it would be interpreted by one of

1 ordinary skill in the art” (Phillips, 415 F.3d at 1316 (quoting In re Am. Acad. of Sci. Tech. Ctr.,
2 367 F.3d 1359, 1364 (Fed. Cir. 2004))). Other evidence of how the patentee and the PTO
3 understood the claims contained in the prosecution history can also inform the meaning of the
4 claim language, although this resource sometimes lacks the clarity of the patent itself. Phillips,
5 415 F.3d at 1317. When interpreting claim terms, district courts may also “rely on
6 extrinsic evidence, which ‘consists of all evidence external to the patent and prosecution history,
7 including expert and inventor testimony, dictionaries, and learned treatises.’” Phillips, 415 F.3d
8 at 1317 (quoting Markman v. Westview Instruments, Inc., 52 F.3d 967, 980 (Fed. Cir. 1995)).
9 Such evidence is especially useful for helping the court understand the underlying technology,
10 explaining how an invention works, and establishing the way in which one skilled in the art
11 would use the claim terms. Phillips, 415 F.3d at 1318. Courts should not, however, put too
12 much emphasis on extrinsic evidence as the starting point for construing claim terms because
13 such evidence “is unlikely to result in a reliable interpretation of patent claim scope unless
14 considered in the context of the intrinsic evidence.” Phillips, 415 F.3d at 1319. The claim
15 construction methodology set forth in Texas Digital, which encouraged district courts to rely on
16 dictionary definitions when ascertaining the ordinary meaning of particular claim terms, with
17 recourse to the specification serving only as a check on the dictionary definition, was rejected.

18 The main problem with elevating the dictionary to such prominence is that it
19 focuses the inquiry on the abstract meaning of words rather than on the meaning of
20 claim terms within the context of the patent. Properly viewed, the “ordinary
21 meaning” of a claim term is its meaning to the ordinary artisan after reading the
22 entire patent. Yet heavy reliance on the dictionary divorced from the intrinsic
23 evidence risks transforming the meaning of the claim term to the artisan into the
24 meaning of the term in the abstract, out of its particular context, which is the
25 specification.

24 Phillips, 415 F.3d at 1321.

25 Even while rejecting the methodology of Texas Digital, the Federal Circuit

1 acknowledged that the purpose underlying that decision, namely to avoid “one of the cardinal
2 sins of patent law -- reading a limitation from the written description into the claims,” was
3 sound. Phillips, 415 F.3d at 1319-20, 1323 (quoting SciMed Life Sys., Inc. v. Advanced
4 Cardiovascular Sys., Inc., 242 F.3d 1337, 1340 (Fed. Cir. 2001)). The court also recognized:

5 that the distinction between using the specification to interpret the meaning of a
6 claim and importing limitations from the specification into the claim can be a
7 difficult one to apply in practice. However, the line between construing terms and
8 importing limitations can be discerned with reasonable certainty and predictability
9 if the court’s focus remains on understanding how a person of ordinary skill in the
10 art would understand the claim terms. For instance, although the specification
11 often describes very specific embodiments of the invention, we have repeatedly
12 warned against confining the claims to those embodiments. In particular, we have
13 expressly rejected the contention that if a patent describes only a single
14 embodiment, the claims of the patent must be construed as being limited to that
15 embodiment. That is not just because section 112 of the Patent Act requires that
16 the claims themselves set forth the limits of the patent grant, but also because
17 persons of ordinary skill in the art rarely would confine their definitions of terms to
18 the exact representations depicted in the embodiments.

19 Phillips, 415 F.3d at 1323 (citations omitted).

20 In this litigation, the parties dispute the meaning of certain terms and phrases in
21 claim 1 of the ‘364 patent which is reproduced here with the disputed terms in italics:

22 1. Process for the thermal fogging of a non-aqueous liquid composition for the treatment
23 of fruit and vegetables, using a liquid treatment composition which comprises:

24 from 80 to 100% by weight of an active principle selected from the group
25 consisting of *eugenol*, an eugenol salt which is acceptable in foodstuffs,
26 isoeugenol, an isoeugenol salt which is acceptable in foodstuffs and their
mixtures;

from 0% to 10% by weight of non-ionic surfactant; and

from 0 to 10% by weight of solvent,

1 wherein *a thermal fogging mist is produced*, from the composition, composed of droplets
2 exhibiting a temperature of 200 to 280° C. which are driven with a *linear velocity* of
3 between *110 and 140 m/s*.

4 Claims 2-24 add various elements or limitations to the invention described in independent claim

5 1. The parties agree that the construction ascribed to the disputed terms in claim 1 will have
6 equal effect throughout the various claims at issue.

7 Having reviewed the memoranda, declarations, and exhibits submitted by the
8 parties and having heard the arguments of counsel and the testimony of the witnesses at the
9 hearing on December 3, 2009,¹ the Court finds as follows:

10 (1) The term “eugenol” is not defined in the claims or the specification. Plaintiffs
11 argue that construction is unnecessary because (a) the meaning of the term is apparent, and
12 (b) defendants have admitted that their products utilize “100% clove oil, a eugenol which is
13 acceptable in foodstuffs.” The second argument implies that “clove oil” is the same thing as
14 “eugenol,” a construction that is not supported by the claim language or the specification.
15 Claim 1 mentions eugenol, isoeugenol, and their salts and specifically requires that the fogging
16 mist be comprised of “80 to 100% by weight” of these principles: there is no reference to cloves
17 or clove oil. The specification discusses a number of alternative active principles, but again
18 makes no mention of cloves or their oil. While prosecuting the patent before the Patent and
19 Trademark Office, the inventor compared the size, duration, and coating qualities of mist
20 solutions containing different percentages of eugenol. The composition with the highest eugenol
21 content was described as “a non-aqueous natural clove oil based formulation, containing 80%

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23 ¹ Plaintiffs’ motion to strike Dr. Hyde’s revised expert report (Dkt. # 39) is GRANTED. Dr.
24 Hyde’s original report was timely submitted and his proposed constructions were considered by the
25 Court. The amended report was filed long after expert reports regarding Markman issues were due and
26 for the first time disclosed Dr. Hyde’s analysis of the disputed terms and his explanation for why
defendants’ proposed constructions are proper. The explanations contained in the revised report (Dkt.
38-2) were not, therefore, considered.

1 eugenol, and related clove oil ingredients.” Decl. of Edgar R. Cataxinos, Ex. 4 at 2 and 4. The
2 inventor thereby acknowledged that eugenol is a component of clove oil: they are not the same
3 thing for purposes of the invention.

4 In light of the claims, the specification, and the prosecution history, the Court finds
5 that one skilled in the art would understand that “eugenol” is not the same thing as “clove oil.”²
6 That does not, however, mean that “eugenol” needs to be construed or that defendants’ proposed
7 definition is appropriate. Eugenol has meaning to those familiar with the art: the inventor did
8 not think it necessary to explain the term or to provide a definition. Defendants’ proposed
9 definition of eugenol as “a colorless or pale-yellow liquid which is present in clove oil in a range
10 between approximately 30% and 95%” is not supported by the patent. Defendants do not
11 explain why they chose a definition based on color and potential source (as opposed to chemical
12 structure, smell, viscosity, etc.) or how it would be helpful to the jury. The Court finds that
13 “eugenol” need not be construed: plaintiffs will be required to show that the accused products
14 exhibit eugenol in the range recited in the claims.

15 (2) Defendants propose that the phrase “a thermal fogging mist is produced” be
16 construed as “a thermal fogging mist is produced at the outlet of the thermal fogger.” Plaintiffs
17 argue that the phrase need not be construed, that defendants have admitted infringement, and that
18 the proposed definition violates the doctrine of claim differentiation.

19 Despite the fact that defendants’ proposed definition mentions a “thermal fogger”
20 that has an “outlet,” defendants are not attempting to impose a limitation related to the device
21 from which the fogging mist emanates. Rather, they are attempting to identify the point at which
22 the composition, temperature, and velocity of the fogging mist are measured in order to

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24 ² Despite their attempt to convert defendants’ statement regarding the use of clove oil into an
25 admission that the eugenol limitation of claim 1 is satisfied, plaintiffs recognize that they have the
26 burden of showing that the accused products use eugenol, not just clove oil, in the range recited in the
claims. Plaintiffs’ Responsive Brief (Dkt. # 57) at 6.

1 determine whether the elements of claim 1 are satisfied. The intrinsic and extrinsic evidence
2 support a finding that the characteristics of the fogging mist must be evaluated at the point where
3 the mist is released from the mist-generating device for the treatment of fruit and/or vegetables,
4 not at some point within the fogging device.

5 Claim 1 requires that a thermal fogging mist be produced from the specified
6 components and that the droplets comprising the mist have a temperature of 200 to 280° and a
7 linear velocity of between 110 and 140 m/s. The natural and unstrained understanding of the
8 claim is that all of the elements must be satisfied at the same time. Because there is no temporal
9 distinction between the production of the mist and the existence of the required composition,
10 temperature, and velocity elements, the mist must have the specified characteristics at the time it
11 is produced.

12 The question then becomes when is the mist “produced?” The invention, as set
13 forth in claim 1, establishes a process for thermal fogging for the treatment of fruits and
14 vegetables. In particular, the inventors claimed to have discovered that the release of a hotter,
15 faster, non-aqueous mist is beneficial because it increases the stability of the mist formed and
16 creates a thin and homogeneous coating on the fruits and vegetables. See Col. 1, ll. 11-61.
17 Creating a thermal fogging mist with the specified characteristics somewhere inside a machine
18 or canister simply is not the invention: the mist is not “produced” until it is discharged from the
19 fogging apparatus to perform its stated purpose. Measurements taken within the fogging device
20 would not accurately reflect the mist that is ultimately generated because the droplets would
21 slow, cool, and agglomerate to the point where the resulting mist might be no better than the
22 mists generated using the prior art.

23 Given that the mist is produced at the time it is released or discharged from the
24 fogging device, the composition, temperature, and velocity elements of claim 1 must be satisfied
25 at that point. This understanding is further supported by the specification and the prosecution
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1 history. The inventors discuss temperature and velocity measurements that are taken at the point
2 where the fogging mist is released, or discharged, from the fogging device. No other
3 measurement site is mentioned or suggested. When explaining the benefits of the invention, the
4 inventors differentiate prior art based on the lower temperatures and/or velocities produced “at
5 the outlet of the thermal fogging device.” See, e.g., Col. 1, ll. 38-41; Decl. of Edgar R.
6 Cataxinos (Dkt. # 56), Ex. 2. The comparisons drawn and claims made by the inventors would
7 make no sense if the point of measurement were to vary widely: the claimed benefits of the
8 invention would not result if the specified temperature and velocity were reached at some point
9 within the apparatus but were allowed to dissipate by the time the mist was released from the
10 fogging device. Thus, the language of the claim, the specification, and the prosecution history
11 all support a finding that the mist is “produced” when it is released or discharged from the
12 fogging device and must at that time satisfy the other elements of claim 1.

13 Extrinsic evidence from John Forsythe and Dr. Hyde supports this conclusion.
14 Both gentlemen are skilled in the art and understand that measurements related to temperature
15 and velocity of fogging mist occur at the point of discharge. Nothing in the patent suggests that
16 the inventors intended to utilize some other, undisclosed measuring point. In fact, whenever a
17 measuring point is mentioned in the specification or prosecution history, it comports with the
18 industry standard as presented by defendants’ witnesses. Mr. Forsythe further testified that it
19 would be extremely difficult, if not impossible, to measure temperatures and velocities prior to
20 discharge because the insertion of measuring devices would affect the characteristics that were
21 being measured. Counsel’s acknowledgment that, if plaintiffs’ proposed construction were
22 adopted, he might have a difficult time getting accurate readings from within the misting
23 apparatus also suggests that an internal measurement point is simply not the industry norm.
24 Because one skilled in the art would understand that the specified characteristics of the mist
25 must be measured where the fogging mist is released or discharged from the fogging device,
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1 both the extrinsic and intrinsic evidence support the Court's analysis.

2 Plaintiffs' admission and claim differentiation arguments are unpersuasive.
3 Defendants admit that the accused product produces a thermal fog. Whether the fog has the
4 proper composition or is "produced" as that term is defined above is not established. Plaintiffs'
5 claim differentiation argument is based on the fact that claims 5 and 6 of the '364 patent refer to
6 a cylindrical channel as the source of the fogging mist. Because claim 1 is silent regarding how
7 or where the mist originates, plaintiffs argue that claim 1 should not be construed to include
8 reference to "the outlet of the thermal fogger." See Phillips, 415 F.3d at 1315 ("[T]he presence
9 of a dependent claim that adds a particular limitation gives rise to a presumption that the
10 limitation in question is not present in the independent claim."). The Court agrees only to the
11 extent that the doctrine of claim differentiation suggests that claim 1 is not limited to a particular
12 type of fogging device or outlet. As long as a thermal fogging mist is produced with the
13 specified composition, temperature, and velocity, claim 1 is satisfied. It does not matter how the
14 mist is generated or whether the device utilizes a cylindrical channel. As discussed above,
15 however, the specified attributes of the fogging mist must exist at the time the mist is released or
16 discharged from the fogging device for the treatment of fruits or vegetables.

17 (3) In order to satisfy claim 1, the fogging mist must have a "linear velocity of
18 between 110 and 140 m/s" at the point where it is released or discharged from the fogging
19 device. Plaintiffs maintain that "linear velocity" need not be construed or, in the alternative,
20 should be construed as "velocity." Defendants object to the proposed deletion of the word
21 "linear" and seek to have the phrase construed as "velocity along a straight line."

22 One can measure the rate of change in a particle's position from a number of
23 vantage points, including along the particle's path (linear velocity) or as a ratio of the angle
24 traversed (angular velocity). The inventors clearly specified the perspective from which the
25 speed of the droplets should be measured: removing the "linear" limitation from the phrase
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1 “linear velocity” is unjustified and could cause confusion. The Court therefore rejects plaintiffs’
2 proposed construction. On the other hand, a particle can have linear velocity even if it is not
3 moving in a straight line. A person standing on the surface of the Earth, for example, is moving
4 in a giant arc around the Earth’s core (*i.e.*, not in a straight line) and has both angular and linear
5 velocities. To the extent defendants’ proposed construction would require the droplets to be
6 moving in a straight line, it is rejected.

7 “Linear velocity” is not defined by the inventors, and neither party has identified
8 any intrinsic evidence that is relevant to the construction of this phrase. Luckily “linear
9 velocity” is a common term that has meaning to lay judges as well as to those skilled in the art.
10 The phrase will be construed as “the rate of change of a body’s position in a particular direction
11 over time.” No further construction is necessary other than to clarify that, although linear
12 velocity has a directional component, a body can have linear velocity even if it does not continue
13 moving in the same direction over time. The direction in which the body is traveling may
14 change moment to moment, as with the person standing on the surface of the Earth.
15 Nevertheless, the person possesses an instantaneous linear velocity in the direction of the tangent
16 to the curve, even as his or her direction changes with the Earth’s rotation.

17 (4) The Court finds that the meter per second values contained in the claims need
18 not be construed. Metric measurements, especially those involving distances, are commonplace
19 and need not be defined or interpreted for the jury. To the extent a conversion is needed to align
20 evidence with the terms used in the patent, the equivalents can be presented through expert
21 testimony, as stipulated facts, or even through the unopposed averments of counsel. See In re
22 Application of Orsini, 158 F.2d 286, 286-87 (C.C.P.A. 1947) (“Calculations furnished to the
23 court by counsel for appellant during the presentation of the case before us gave the English
24 equivalents of the metric terms used in the claims . . .”).

1 It is so ORDERED.

2 Dated this 7th day of December, 2009.

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4 Robert S. Lasnik
5 United States District Judge
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